







The Critical Role of Yacht Air Conditioning

In any yacht design, especially in the design of a super vacht, air conditioning plays a critical role. No matter how elegant the surroundings, they won't feel luxurious if the temperature of the living area is less than comfortable. It is wise, therefore, to engineer the air conditioning system for the unique characteristics of each yacht, and address climate control with as much attention and expertise as you give to the design of the yacht itself.

Occasionally, naval architects, builders, and owners do not have the experience and specialized knowledge it takes to assess realworld air conditioning requirements. Look to

Dometic for the resources and expertise you need. Our senior engineers can design your yacht's air conditioning system or review your design and specifications to make sure everything is correct.

The Three Biggest Challenges When Choosing the Right Company

Do you know the three biggest challenges to consider when choosing the right air conditioning company for your yacht?

- Complete engineering support: Proper system sizing, specifications, installation supervision, and system training.
- Broad selection: A wide variety of chilled water systems, air handlers, and control systems to suit the needs of different yachts and different usage profiles.
- Equipment reliability: Quality, dependable equipment backed up by a certified worldwide service network.

Since 1959, Dometic Cruisair and Marine Air have been providing the most proven and innovative marine air conditioning systems in the world.

Dometic's expert and experienced engineering team will review your drawings and specifications to ensure all measurements and load calculations are correct. Or, you can have them layout your system, size all the appropriate capacities, and provide you with the world's broadest range of equipment and accessories. We also support installation and startup supervision, reliable documentation, and system training.

Dometic engineers and builds the most dependable air conditioning systems in the

world, and keeps them running with a global network of trained sales and service personnel, available 24/7, 365 days a year.



Custom Load Calculation Table Note

Capacity From 16,000 to 2.52 Million BTUs

Required BTU/hr

Dometic's chillers range in capacity from 16,000 to 2.52 million BTUs. To meet many unique needs, systems are available in a variety of styles, such as compact units, modular staged units, and mammoth tube-andshell systems for very large yachts. Custom chillers can also be designed

Key Benefits

- Largest equipment selection.
- Global service network.

to meet special needs.

- Installation supervision.
- Proper system sizing.
- Equipment reliability.

For Yacht Lengths of 20m to over 90m

Single Stage Cruisair's reverse-cycle TWC Compact is available in 24K-36K BTU/hr models.

Mid-Range Capacity





72,000

144,000

Mid-Range Capacity Multi Stage

Cruisair's new environmentally-safe MTD provides up to



360,000

600,000

Large-Capacity **Tube-and-Shell**

Dometic:

Global Leader

In Marine Air

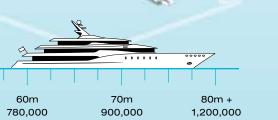
Conditioning fo

50 Years.

Designed for pleasure yachts and commercial vessels, the 25-ton MTS tube-and-shell chiller provides high-capacity cooling in modular form.







Custom Engineering Solutions

Dometic Eliminates Your Sizing Guess Work

Dometic's engineering team will work with you to develop a chiller system that meets your BTU capacity and fits the spatial limitations of your yacht's

architecture. Our engineers are with you from start to finish with system design, installation supervision, system start-up, documentation, and training.

SINGLE ATV AIR HANDLER



Load Calculation Table

Length	Width	Area (sq. ft.)	Load Factor	Capacity (BTU/hr)
14'	20'	280	150	42,000
40'	20'	800	120	96,000
10'	10'	100	90	9,000
14'	10'	140	90	12,600
8'	8	64	90	5,760
12'	7'	84	90	7,560
	14' 40' 10' 14' 8'	14' 20' 40' 20' 10' 10' 10' 8' 8'	(sq. ft.) 14' 20' 280 40' 20' 800 10' 10' 100 14' 10' 140 8' 8' 64	(sq. ff.) Factor 14' 20' 280 150 40' 20' 800 120 10' 10' 100 90 14' 10' 140 90 8' 8' 64 90

OUR ATL AIR HANDLERS

CAPTAIN'S CABIN: NGLE AT-DC AIR HANDLES

World's Broadest Selection and Variety of Chilled Water Systems and Accessories for SuperYachts

D Dometic **Iruisair**





Single Stage Chillers



▼ TWC36C

The TWC chiller cools and heats, and is currently available in 24K, 30K, and 36K BTU/hr sizes.

Voltage/Cycle/Phase 36,000 BTU/hr All standard voltages.



MCWLP

The modular MCW Low Profile is available in 36K to 72K BTU/hr models in a height-saving design.

Capacity	Voltage/Cycle/Phase
72,000 BTU/hr	All standard voltages.



The modular MCW is available in capacities from 24K BTU/hr to 180K

Capacity	Voltage/Cycle/Phase
180 000 RTI I/hr	All standard voltages

Custom Multi Stage Chillers



▼ TWC3X2.5HC-CS-TWLC

Three 2.5-ton TWC units on a standard base.

Capacity	Voltage/Cycle/Phase
90,000 BTU/hr	230/60/1

FMTC55VDC-407

Two 5-ton MTC units on a vertical

	Voltage/Cycle/Phase
120,000 BTU/hr	230/50/3

◀ MCW192

Four 4-ton MCW units mounted on a standard base.

apacity	Voltage/Cycle/Phase
92,000 BTU/hr	230/60/3

FMTC4X5.5HECK >

Four 5.5-ton units on a standard base with bolt-on frame.

Capacity	Voltage/Cycle/Phase
64,000 BTU/hr	230/60/3



FMTC5X5HD-407

Five 5-ton MTC units painted Japanese Coast Guard green.

apacity	Voltage/Cycle/Phase
00,000 BTU/hr	230/60/3

FMTCLP6X5VDC

Six 5-ton MTC low profile modules on a custom frame.

Capacity	Voltage/Cycle/Phase
360,000 BTU/hr	230/60/3

MCW480(009)SCL

Four 10-ton MCW cool-only units on a custom vertical frame.

Capacity	Voltage/Cycle/Phase
480,000 BTU/hr	208/60/3

MCW540(002)SEHN

Three 15-ton MCW cool-only units on a custom frame.

Capacity	Voltage/Cycle/Phase
540,000 BTU/hr	460/60/3

All Chillers Available In 60Hz or 50Hz



Tube-and-Shell Chillers



◀ MTS480 Two 20-ton MTS

units on standard base and frame.

Capacity	voitage/Cycle/Pria
480,000 BTU/hr	380/50/3

STS540(001)SEH ▼

Three 15-ton units with tube-and-shell condensers on a custom base and frame.

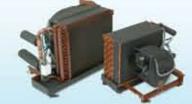
Capacity	Voltage/Cycle/Phase
540,000 BTU/hr	230/60/3





Dometic's Pump Packages conveniently reduce the installation time of chilled-water systems by combining several necessary components in one package.

- Includes pump, expansion tank, dual-scale (psi/kPa) pressure gauge, and fill assembly.
- Bladder-style expansion tank relieves water pressure to prevent leaks.
- Dual-scale pressure gauge is convenient for US and international customers.



AT-MU air handlers are designed for use in fresh air make-up systems where outside air is drawn in by the air handler, cooled, dehumidified, and reheated to room temperature, then ducted to various areas.

- Compact design with vibration isolation mounts.
- Electric heat with 2-stage electric heat overload.
- Integrated 3-way bypass valve.



Our Variable Frequency Drive eliminates the large starting in-rush of current of the compressor by ramping up voltage and frequency in a controlled time period.

- 208/230V 3-phase output with 1-phase or 3-phase
- Full 60Hz capacity even at 50Hz input (230V only).
- 400/480V 3-phase models available.



Accessories for improved efficiency of chilled water AC

- The Spirovent[™] bleeds the entire system of excess air.
- The **Back-flow Preventer** protects fresh water from contamination.
- The Pressure Regulator protects the loop water from high-pressure damage.

World's Broadest Selection of Controls and Air Handlers









Ship-Wide Networkable Controls

Total Control at the Touch of a Button

For complete climate control on board your yacht, Dometic Cruisair and Marine Air offer the **Q-Logic** and **Elite™** digital control

systems. Both are available with optional CAN-bus network adapters, and a wide variety of attractive, stylish bezels.



Cruisair Q-Logic Controls:

- Dual microprocessor-based.
- Supports both the Qht and Q3 displays.
- Optional CAN-bus network adapter provides ship-wide monitoring and climate control.



Marine Air Elite™ Control:

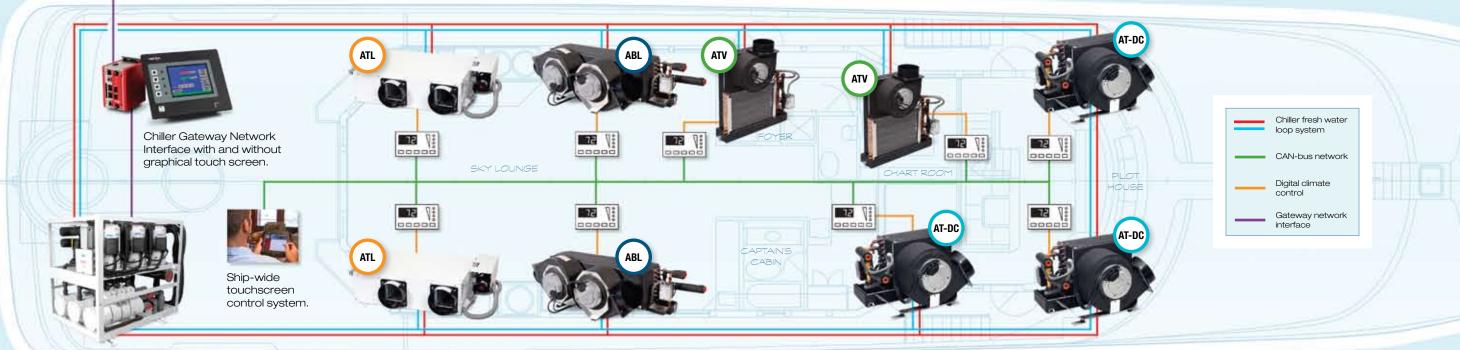
- Operates with Passport I/O circuit board.
- Integrated faceplate air sensor.
- Optional CAN-bus network adapter provides ship-wide monitoring and climate control.

The Cruisair Chiller Gateway allows monitoring and control of a Cruisair multi-staged chiller system from a remote location via a Modbus TCP/IP connection. Puts chiller control on yacht's integrated network. High-speed digital interface. Monitors the optional Variable

 Configuration capable of monitoring up to six chillers.

Frequency Drive.

 Monitors temperatures, current, pressures, input/output status, system faults/alarms, mode of operation, and system logs.



Chilled Water Air Handlers

Featuring WhisperCool Technology

WhisperCool Technology eliminates the annoying "motor hum" from traditional air conditioning blowers that occurs at very low speeds. Incoming alternating current is converted to drive a high-efficiency, brushless DC fan motor. The result is a much quieter fan operating across a broad

range of variable speeds, permitting the user to select the desired comfort level. Additional improvements eliminate condensate drain problems. Better dehumidification, better cooling, less noise...just the kind of performance one expects aboard a luxury yacht.

AT-DC Air Handler:

- Advanced, super-quiet variable speed DC fan motor.
- Engineering improvements eliminate condensate drain challenges—a positive-flow drain pan, larger drain connections, offset coil from drain-pan edge, and a redesigned bypass valve.
- Improved coil design for better dehumidification and cooling.
- More accessible maintenance points.

ATL and ABL Air Handlers:

- Height-saving design is ideal for over-head applications.
- Suspend from above or support from beneath.
- Vibration isolation included
- Heater elements accessible from underneath.
- Bypass valve has removable power head for simple servicing.
- Valve body is soldered to unit to prevent leaks.

ATV Air Handler:

- Fits into walls.
- Unique vertical design.
- Minimal depth.
- DC blower provides strong, quiet performance.
- Blower rotates to vertical or horizontal positions for ducted applications.
- Electric heater included.

Dometic's Environmental Policy

We are committed to minimizing the environmental impact of our products through regular assessment of energy and material demands, emissions, waste generation, and recyclable resources.

For many years we have proudly displayed our "Environmentally Responsible" logo, which indicates our commitment to protecting the environment.

Since 1994, with the phase out of R-12 and now R-22, Dometic leads the industry in the development of globally compliant marine air conditioning systems.



Certified Worldwide Sales and Service Network



DOMETIC CORPORATION, ENVIRONMENTAL DIVISION

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